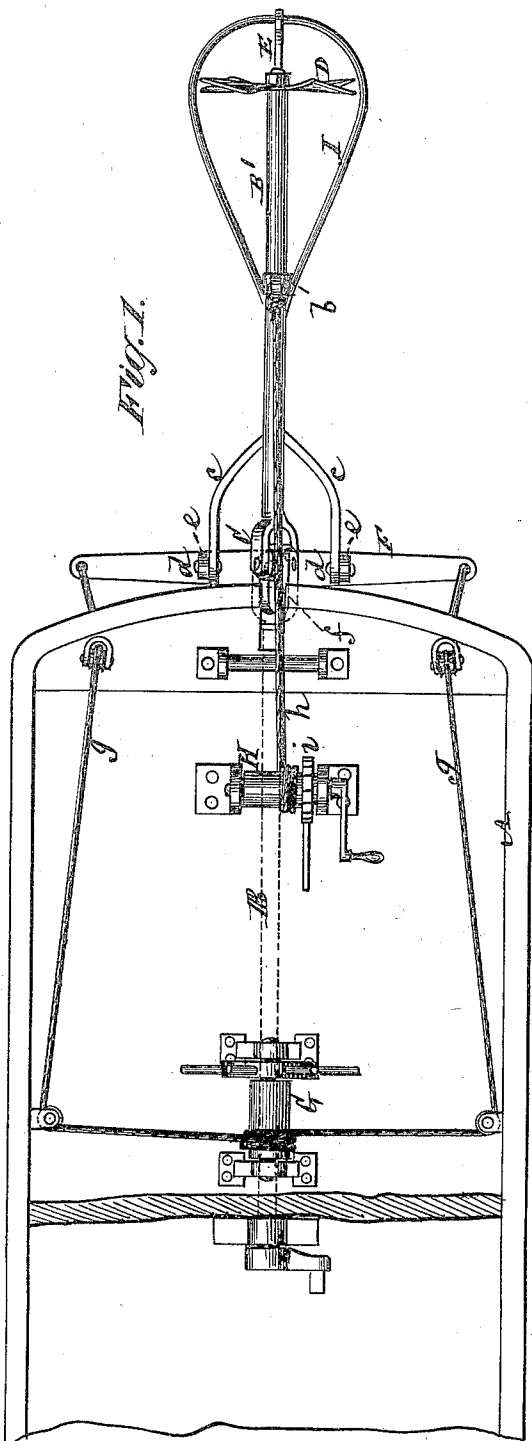


J. H. ALLYN.

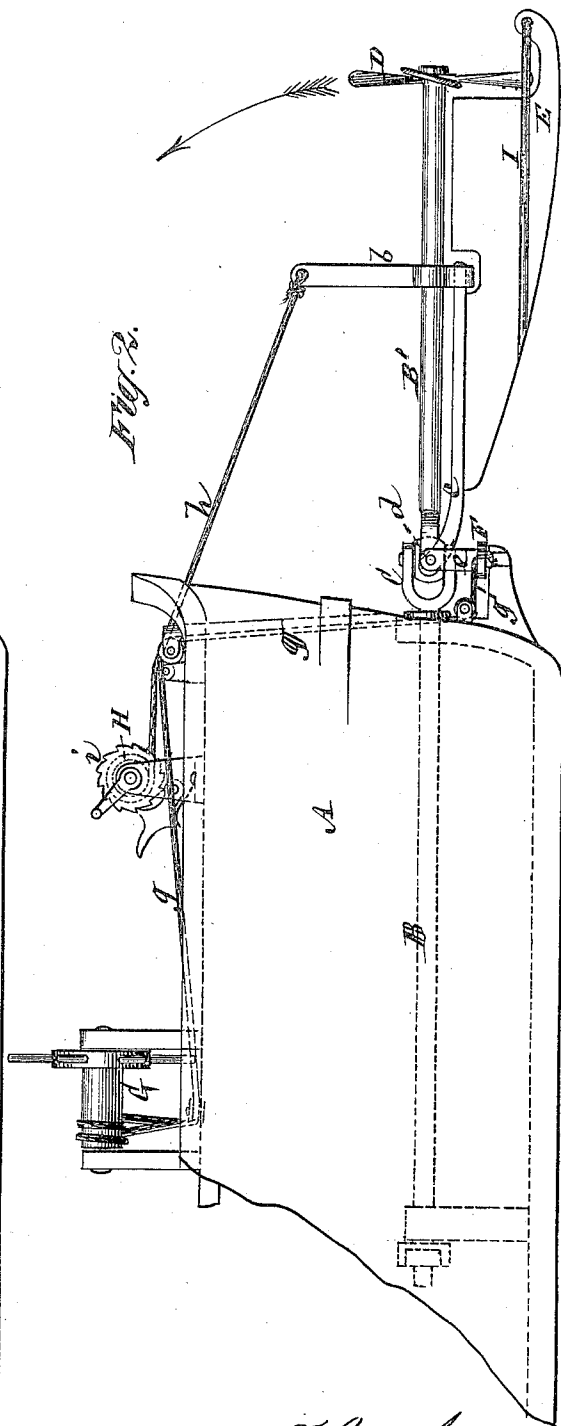
COMBINED STEERING AND PROPELLING APPARATUS.

No. 172,367.

Patented Jan. 18, 1876.



Witnesses
John Becker
Fred Haynes



John H. Allen
by his Attorney
Brown & Allen.

UNITED STATES PATENT OFFICE.

JOHN H. ALLYN, OF WHITESBORO, ASSIGNOR OF ONE-HALF HIS RIGHT
TO BENJAMIN T. BABBITT, OF NEW YORK, N. Y.

IMPROVEMENT IN COMBINED STEERING AND PROPELLING APPARATUS.

Specification forming part of Letters Patent No. **172,367**, dated January 18, 1876; application filed
November 13, 1875.

To all whom it may concern:

Be it known that I, JOHN H. ALLYN, of Whitesboro, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Steering and Propelling Devices for boats on canals and other navigable waters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention, which is more particularly designed for boats on canals, relates in part to combined propellers and rudders made capable of being elevated out of the way, or of being lowered to suit various depths of water. The invention consists in a combination of a submerged tiller, a rudder pivoted at its inner end to the latter, to admit of the rudder rising and falling on the tiller as a base, as well as of being turned by the latter. The invention also consists in a combination of a propeller with a rudder and a tiller, to which the rudder carrying the propeller is hinged. Furthermore, the invention consists in a hinged or rising and falling rudder constructed of a sled-runner or shoe shape on its lower edge, to facilitate the passage of the rudder over irregularities on the bottom surface of the water-course.

Figure 1 represents a plan of the stern end of a canal-boat with my invention applied, and Fig. 2 a side view of the same.

A is the hull of the boat, or, rather, stern portion thereof. B B' is the propeller-shaft, made in two sections, united by a universal joint or coupling, C, outside the stern. The shaft-section B is within the boat and driven by the engine, while the other shaft-section, B', which carries the screw or propeller D, projects in rear of the boat. E is the rudder, which, when down, has its length in direction of that of the boat and of the shaft-section B', under which it is arranged, and with which it is connected by a bearing, b, for said shaft-section, in rear of the universal coupling C, or between the latter and the propeller D. The inner end of the rudder is supported by and hinged to the tiller F, which here is arranged below the propeller-shaft, and serves not only as a tiller, but a rudder-support also. Thus, the inner end of the rudder is connected,

by a yoke, c, and pivots d, with stanchions e on opposite sides of the working center or axis f of the tiller. This combination of the rudder and tiller not only provides for the working of the rudder to effect the steering—as, for instance, by tiller-ropes or chains g g and windlass G—but also for the raising and lowering of the whole rudder from its hinged attachment with the tiller, as by a rope or chain, h, and windlass H. By the connection of the propeller with the rudder it also is raised and lowered in common with the latter, and both the rudder and propeller may be thrown or raised up against the stern of the boat and out of the way by the same means, when it is not necessary that they should be submerged. Said rudder and propeller may also be adjusted, as by a ratchet, i, to any desired amount of submersion, or to suit different depths of draft. Said rudder, with attached propeller, is free, however, to ride over obstacles in the bottom of the canal, no matter in which direction the boat is going; and to this end the rudder is of sled-runner or shoe construction on its lower edge, which may even travel on the canal-bottom to aid in support of the rudder and propeller. In this way the rudder and propeller are protected from injury, and the propeller, which works within or at the back end of the rudder, is further protected from fouling by means of a guard, I, carried by the rudder.

I claim—

1. The combination, with the submerged tiller F, of the rudder E, pivoted or hinged at its inner end to the latter, to admit of the rudder rising and falling on the tiller as a base, as well as of being turned by the latter, essentially as described.

2. The combination of the propeller D with the rudder E and the tiller F, to which the rudder carrying the propeller is hinged, substantially as specified.

3. The hinged or rising and falling rudder E, constructed of a sled-runner or shoe shape on its lower edge, essentially as and for the purpose herein set forth.

JOHN H. ALLYN.

Witnesses:

C. H. WILLIAMSON,
WM. B. QUIGLEY.